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THE PERSIAN GULF CRISIS AND THE AFRICAN ECONOMIES

91-62

I. INTRODUCTION

1. The crisis in the Persian Gulf, which erupted on 2 August 1990 as a result of the invasion and annexation of Kuwait by Iraq, and intensified with the United Nations blockade and imposition of economic sanctions on Iraq and occupied Kuwait, amounted to a serious and profound shock to the world economy. It heralded for Africa the third energy shock in recent history and, short in duration as this particular energy shock has turned out to be, given the dramatic reversal in the escalation of oil prices with the onset of war in the Persian Gulf as from 17 January 1991, it has underscored once again the extreme vulnerability of the African region and the stark reality that, as a region, Africa has remained as unprepared and as unadapted as it was during the two previous shocks in 1974 and 1979, in responding to and coping with energy crunches and crises.

2. The consequences of the Persian Gulf crisis and the war that culminated from it went however beyond the disruptive impact of an energy shock insofar as the African countries are concerned. It had far-reaching socio-economic consequences that many African countries, already beset with myriads of problems, have additionally had to cope with and are still coping with. Both the crisis and the war have had a particularly negative and telling impact on the ailing and fragile African economies during the second half of 1990, as it did have on the economies of the other regions of the world, but its full ramifications and repercussions may as yet be difficult to accurately gauge even now that military conflict and warfare have ceased, let alone the medium- and long-term impact

3. This preliminary assessment of the economic impact and consequences of the Persian Gulf crisis and war, and the evolving events associated with their aftermath, insofar as Africa is concerned, is based on preliminary data and will need therefore to be revised continuously. The particular dimensions highlighted in the paper relate to trade (imports and exports), resource flows, the labour market, output growth and price trends, and the policy implications of the crisis and post-war developments for Africa.

II. THE IMMEDIATE IMPACT AND CONSEQUENCES

A. Higher oil prices and supply difficulties

4. One of the most immediate and direct consequences of the Persian Gulf crisis was a petroleum price bubble, spanning the entire duration of the crisis and up to the start of actual military conflict, and the disruption in oil supplies to countries, such as those of Eastern and Southern Africa, that traditionally depended on Iraq and Kuwait and the Persian Gulf region in general for oil. In particular, the escalation of oil prices and their increased volatility have adversely affected the balance of payments of non-oil producing African countries even though the lot of the oil exporters on the continent improved somehow, albeit only temporarily. The oil exporters gained financially while the oil importers lost and had their hopes of economic recovery almost derailed. It was a zero-sum game while the bubble lasted, involving, in part, some partial redistribution of real income as between oil producers and consumers rather than a straightforward accretion to the overall regional income all the way.

5. The trend in crude oil prices, which were generally weak for the first half of the year, took a sharp turn following the onset of the Persian Gulf crisis. Between January and June 1990, oil prices had fallen steadily from $US 20 a barrel to $US 16 a barrel. And even the OPEC meeting of 27 July 1990 that had introduced new quotas aimed at setting a new reference price of $US 20 a barrel could not stem the tide. But the threat of war in the Persian Gulf, the imposition of the United Nations embargo on trade with Iraq and occupied Kuwait, and the sudden removal from the market of the combined Iraqi and Kuwaiti oil production (which represented some 20 per cent of total OPEC supplies) sent oil prices climbing fast. Prices quickly reached $US 40 a barrel, thereafter fluctuating widely and nervously, depending on the uncertainties of petroleum supplies from the Persian Gulf and the perceived prospects for armed conflict or peaceful resolution of the crisis. Overall, the price escalation accounted for an average of about $US 35 a barrel in October 1990, and, for the whole year, some $US 23.7 a barrel or a third more than the average price for

oil in 1989. It was not until the beginning of 1991 that oil prices actually started falling and have continued to fall ever since, to less than $US 20 a barrel.

6. For Africa's petroleum net-exporting countries (Algeria, Angola, Cameroon, the Congo, Egypt, Gabon, the Libyan Arab Jamahiriya, Nigeria and Tunisia), the Persian Gulf crisis provided an unexpected but welcome windfall of increased foreign exchange earnings. Aggregate petroleum production by African countries is reckoned to have reached about 324 million tons in 1990, of which about 210 million tons were exported. On the basis of quotas set by OPEC after the United Nations embargo on Iraq and Kuwait, petroleum production in Nigeria rose from an average 1.7 million b/d in 1989 to almost 2 million b/d in 1990 while in the Libyan Arab Jamahiriya, the estimated petroleum output in 1990 was about 1.5 million b/d compared to 1.3 million b/d earlier in the year or 1.1 million b/d in 1989. Given the average price of $US 23.69 per barrel for 1990, gross revenues from petroleum exports for the year would have reached about $US 35.8 billion in the African oil-exporting countries, some 30 per cent or $US 10 billion more than in 1989. It must be admitted however that the estimate of revenue boosts accounted for by petroleum export earnings in 1990 is necessarily mechanistic as it takes no cognizance of the likely impact of forward contracts or increased sales at concessionary prices, and is therefore likely to contain elements of overvaluation.

7. But, whatever the exact magnitude of the windfall, it could hardly have been foreseen by the African petroleum exporters who, for the most part prior to the outbreak of the crisis, had generally predicated their 1990 budget estimates on petroleum prices at no higher than $US 15 a barrel. It certainly brought some measure of relief to the balance-of-payments pressures and import constraints in countries such as Algeria and Nigeria which at the same time laboured under severe external debt-service burden, even though creditors generally became more insistent, with the advent of the short-lived mini "oil boom", on more ample servicing of debts by the oil exporters.

8. While the African petroleum net-exporting countries invariably benefitted from the petroleum price and production bubble associated with the crisis in the Persian Gulf, the 42 petroleum net importing African countries were unmitigated losers; and their financial losses, as measured by the additional cost of importing oil, must perforce be written off against the extra earnings of Africa's oil exporters. With no significant hydro-electric power potential or coal deposits in many of the petroleum-importing countries, petroleum is the primary source of commercial energy consumption, accounting for at least 60 per cent in most countries, and extremely vital to the industrial, mining and transport sectors. Thus, the petroleum-importing African countries had to absorb the full impact of the surge in petroleum prices as well as the uncertainties of supplies during the Persian Gulf crisis. These countries, altogether, import only about 0.5 million barrels of petroleum per day, but modest as such a requirement is by international standards, it already accounts for about 20 per cent of the annual import bill for countries such as Ethiopia, Kenya, the United Republic of Tanzania, Rwanda, the Sudan, to mention a few. As a consequence of the Persian Gulf crisis, the petroleum import bill of this group of countries soared in 1990 to about $US 9.5 billion, which is $US 2.7 billion or 32 per cent more than in 1989 and the equivalent of 2 per cent of GDP. What the Persian Gulf crisis has forcefully demonstrated is the extreme vulnerability of the oil market which African oil-importing countries depend principally upon for energy. Faced with a crunching fuel shortage, many of these countries, already crippled with a debt crisis, had to resort to severe rationing in the sale of petroleum fuels in order to prevent general economic life grinding to a halt.

9. Even before the Persian Gulf crisis, fuel supplies in the petroleum-importing countries in sub-Saharan Africa were already the most costly in the developing world because of inefficient refining and the chronic lack of foreign exchange which forces them to procure petroleum in small batches, often after being refined elsewhere. This allowed little scope for bargaining on world markets. Also, the fact that these countries tended to be less diversified in their petroleum sourcing made them dangerously vulnerable in the event of disruption of supplies. This was exactly the situation with many African countries especially those in Southern and Eastern Africa, which had concessional long-term contracts with countries of the Persian Gulf, especially Kuwait and Iraq, for the bulk of their petroleum supplies. Following the invasion of Kuwait and

the subsequent imposition of economic sanctions, these countries had to resort to the spot market at prices that were much higher than stipulated in their long-term supply contracts. To crown it all, in most petroleum net-importing African countries inefficient ports, bad roads, unreliable railways and inadequate commercial distribution networks make oil deliveries expensive and unreliable. Thus, in these countries, the advent of the Persian Gulf crisis saw the birth of a new and equally debilitating crisis in the form of an energy crunch which the African oil-importing countries had to adjust to in terms of higher energy prices and increased uncertainties in the supply of oil and oil by-products. Given the limited scope for oil substitution and for reduction of oil consumption per unit of output in the short term, and the noticeable trend of increasing oil intensity in GDP in the 1980s, the increase in oil prices imposed an enormous pressure on the current account of the balance of payments and additionally translated into lower industrial growth and higher inflation rates in these countries. Since many countries had little or no choice but to pass on to the consumers the additional cost of importing oil, transport costs increased generally, translating directly into higher prices for food and other commodities. These inflationary tendencies, in turn, intensified the trend towards deflationary policies in many countries, with the real growth in public and private consumption slowing down.

10. Perhaps the most severely adversely affected are the 29 African least developed countries, especially the land locked and remotely placed and isolated among them. Dependent often on poor roads and ill-equipped transportation networks for their import-export trade, and without buffer stocks of petroleum or petroleum refinery or hydro-electric generating capacity or coal, some of these countries have experienced as much as 100 per cent or more increase in petroleum prices as a result of the Persian Gulf crisis, with consequent steep increases in other prices and the costs of inputs.

B. Impact on trade and finance

11. The impact of the Persian Gulf crisis on Africa's trade should not just be perceived in the narrow context of oil exports and imports. The combination of higher prices for oil and for manufactured imports, and weaker prices for non-fuel commodity exports produced a big balance-of-payments disequilibrium for the oil-importing African countries and impaired further their capacity to service their debt. Resource flows to African countries, remittances from expatriate migrant workers in the Persian Gulf and the importance of the Suez Canal for the import-export trade of the Middle Eastern countries are additional aspects that would have to be considered, especially insofar as countries of North Africa are concerned.

12. African exports to the Middle East amounted to $US 1.3 billion in 1989, of which 72 per cent was accounted for by North Africa and the remaining 28 per cent by sub-Saharan Africa. The corresponding African imports, on the other hand, totalled about $US 3.1 billion, of which North Africa accounted for roughly 37 per cent while sub-Saharan Africa accounted for the remaining 63 per cent. All this trade, involving export of light manufactures and consumer goods from North Africa, and the import of oil and oil by-products, was substantially disrupted by the crisis in the Persian Gulf, creating uncertainties in supplies. Moroccan firms are estimated to have lost about $US 100 million worth of orders from Iraq and Kuwait as a result of the economic sanctions imposed on Kuwait and Iraq. The tensions and climate of uncertainty were such that foreign exchange earnings from tourism were adversely affected in many North African countries. Fear of terrorist attacks and of sabotage resulted roughly in a 60 per cent reduction in tourist vacations in Egypt during the crisis, bringing about an estimated loss of $US 500 million for the period from 2 August 1990 to 31 December 1990. Losses from reductions in vessels and freight passing through the Suez Canal, one of the three pillars of the Egyptian economy, is estimated to have reached about $US 200 million up to December 1990. Also, as a consequence of the United Nations embargo against Iraq and Kuwait, it is estimated that Egyptian companies incurred losses in trade opportunities worth about US$ 500 million. The tourist industry in Morocco, which is a major foreign exchange earner for the country, was estimated to have suffered close to 50 per cent reduction in business volume as a direct result of the crisis. Additionally, sub-Saharan African countries such as Kenya, Mauritius, Seychelles, Comoros and the

United Republic of Tanzania are estimated also to have incurred substantial losses as a result of up to 40 per cent reductions in tourist bookings brought about by the Persian Gulf crisis.

13. Countries of North Africa and the Sudan, with large expatriate labour in the Persian Gulf, have suffered in addition from the repatriation of their nationals previously working in Iraq and Kuwait, and have had to face up to the huge costs of relocation or rehabilitation of repatriated workers. For Egypt alone, it has been estimated that some $US 4.7 billion would be required in resettling the 600,000 migrant workers returning from Iraq and Kuwait, although it is possible that some of these might be re-absorbed in liberated Kuwait and some other countries in the Persian Gulf. The Sudan lost a substantial portion of its estimated $US 150 million of workers' remittances from the Persian Gulf region as a result of the crisis.

14. The crisis also halted the flow of money from North African and Sudanese migrant workers in Kuwait and Iraq. According to some estimates, workers' remittances to Egypt amounted to $US 4.2 billion in 1988-1989 alone; but this plummeted to $US 1.8 billion in 1990 as a result of the Persian Gulf crisis. The exodus of Sudanese and Moroccan workers from Iraq and Kuwait is estimated to have reduced the foreign exchange earnings of each of these two countries by about 10 to 20 per cent.

15. Some African countries were hit by the loss of aid and resource flows from the Middle East. The loss of Kuwaiti investment was of particular concern to the countries of North Africa and a few other sub-Saharan African countries, although there was, at the same time, some increased financial assistance from Saudi Arabia to Egypt.

C. Impact on growth

16. The substantial rise in oil prices in the last two quarters of 1990 had, no doubt, a positive effect on the incomes and growth prospects of the oil-exporting African countries. In addition to boosting government revenues, the impact of the higher levels of petroleum production and their associated effects were such that an improved growth performance in GDP was recorded in the petroleum-exporting countries. Indeed, the Persian Gulf crisis may have spurred GDP growth by as much as 2 per cent in the African oil-exporting countries in 1990.

17. Even without the higher petroleum prices associated with the Persian Gulf crisis, the petroleum net-importing countries in Africa were already experiencing severe external payments difficulties. On account of stagnation in their exports of primary commodities, falling commodity prices and demand, these countries were already suffering from declining capacity to finance imports. Indeed, their acute financial difficulties will have to be seen in the context of already severe external debt-servicing obligations, stagnant official development assistance (ODA), and overall lack of resources for sustaining programmes of reform and socio-economic transformation. The reduction in the level of imports, including vital capital goods, spares and intermediate inputs, and the escalation of domestic inflation, as a result of the surge in petroleum prices, may have translated directly into a decline in economic activity of the order of 1 per cent in real GDP in 1990 in the African oil-importing countries, but the full effects of their negative impact will naturally take time to work themselves out. And even though the Gulf crisis appears to have been largely resolved at this point, its consequences may already have been too strong and pervasive enough to depress output significantly in 1991 in the fragile economies of the petroleum importing countries of Africa. Unless there is, of course, larger and more flexible external assistance to mitigate the damage already done by the crisis.

18. In this respect, one of the disappointing aspects of the Persian Gulf crisis insofar as the African countries are concerned was the feeble response of the international community and the donor countries in assisting them to finance an external shock over which they had little or no control. There was some offer of emergency financial relief from the International Monetary Fund, but this was mostly through the use of and adaptation of existing instruments (such as stand-by, extended SAE/ESAF arrangements and compensatory and contingency financing mechanism) rather than the operation of new or separate facilities;

and, whatever added financing that was to accrue through the oil-import element was to be made available in the context of the already controversial structural adjustment programmes (SAPs). The result was that most of the gap in the current account of the African oil- importing countries was met by contraction. No special measures or assistance programmes were put forward or undertaken by the United States and Japanese Governments or the member countries of the European Community to alleviate the impact of the crisis on the African countries except for Egypt which benefitted substantially from US aid and debt reduction and financial assistance from the Gulf Financial Crisis Co-ordination Group.

III. THE MEDIUM- AND LONG-TERM IMPACT AND SCENARIOS, AND THEIR IMPLICATIONS FOR POLICY IN AFRICA

19. The medium- and long-term consequences of the Persian Gulf crisis for Africa, and the implications for policy, must be assessed in terms of the future of the petroleum market and the indirect effects through its impact on the global macro-economic outlook for 1991 and beyond. The post-Persian Gulf war period presents Africa with a new set of challenges in addition to the already pressing ones of re-launching the process of development on the continent. The energy issue, which seems to have been neglected in Africa since the early 1980s, will have to be revisited.

20. The medium-term outlook for the world petroleum market, on which depend the developments in the African oil-exporting countries that account for up to 45 per cent of the region's GDP, is far from bright. With the expansion in oil production that took place with the advent of the Gulf crisis, notwithstanding the fact that Kuwait and Iraq were out of production, and the deliberate release of an additional 2.5 million barrels a day from strategic reserves under the co-ordination of the International Energy Agency (IEA), supplies have generally been more than adequate to meet demand, and the price of oil had started to fall even by January 1991, when the war started; and fears that prices would fall even further have been fairly justified up until now. Crude petroleum prices have since averaged about $US 18 a barrel since February 1991, close to the level in July 1990, and there are those who believe that prices could eventually settle at as low as $US 10 a barrel or even less if the IEA were to maintain its policy in flooding the market for long and OPEC producing countries continue to pump more oil. The fact that oil is the biggest export commodity in Africa and likely to remain so for the foreseeable future means that the consequences of such a slump would be extremely serious if not catastrophic for the African region as a whole.

21. The reasons for such a pessimistic view of the oil market are not far to seek. Except for the damage to production facilities in Kuwait and Iraq, the anticipated widespread destruction of oil wells and supply disruptions in the Persian Gulf as a whole have failed to materialize. Iraq and Kuwait may be unable to produce oil at meaningful levels for a year to two year to come, but once production is back on stream, the two countries are bound to feel compelled to pump petroleum at their maximum installed capacity, given the enormous and extensive costs of repairs to damaged infrastructure. Saudi Arabia which, on the other hand, escaped relatively unscathed and with little physical destruction from the war, has massive war bills to settle with the allied forces - not to mention the demands of a possible new military build-up as part of security equation and arrangement in the Middle East; it, too, may feel compelled to maintain high output levels. Other petroleum producers - whether OPEC members or not - are unlikely to accept easily to cut back on production in the face of chronic balance-of-payments problems, especially if, as is most likely, the Persian Gulf States do not themselves adhere strictly to any production cutbacks. With the world demand for petroleum continuing to be as flat as it has been since the 1979 oil shock, the glut on the petroleum market may keep prices low until the second half of the present decade. Since there is no guarantee that the drop in the foreign exchange earnings from the export of oil can be accommodated, even partially, by the earnings from Africa's non-oil commodity exports, the likely consequences of the foreseeable and uncertain developments on the petroleum market are a more stringent foreign exchange constraint on economic development in Africa.

22. While there was already a slow-down in economic activity in the OECD countries even before the Persian Gulf crisis, the crisis may well have added to the down-turn and precipitated what could become a full-grown recession in 1991 in these countries which are Africa's major trading partners and important sources of external finance. Were this to happen and there is already unmistakable evidence that the end of the Persian Gulf war will not by itself spur global economic recovery, the demand for Africa's traditional exports may be further adversely affected, and export earnings may dwindle to a mere fraction of their 1990 level while import capacity shrivels and the human costs of adjustment become even more unbearable, thus dampening the growth momentum and the fragile incipient recovery in the African region. With the demand for primary exports remaining weak in general, the oil-importing African countries may find themselves in a worse situation in 1991 and beyond, particularly insofar as the resource requirements for sustaining higher import levels and current account deficits are concerned.

23. The resource requirements for sustaining higher levels of overall growth in Africa may also be adversely affected in another way. As world financial markets become overburdened with the huge repair bills for the Persian Gulf region, in addition to the financial requirements of the reforming economies of Eastern Europe and the USSR, interest rates are bound to rise substantially while credit availability becomes more and more difficult. The African countries, with their already severely eroded credit-worthiness and limited capacity for attracting foreign investment, are likely to further experience a financial crunch. The financial famine of the 1980s may yet, in retrospect, turn out to be insignificant in comparison with the difficulties with development financing in Africa in the 1990s.

24. It is possible that the reconstruction needs of Iraq and Kuwait may spur an increase in demand for migrant workers from some African countries; but even this is not certain. Kuwait is reported to be disillusioned with guest workers (other than those with high technical skills) and is likely therefore to reduce its future dependence on this factor input. Also, depending on which side a country took during the Persian Gulf crisis, it migrant workers might not even be that welcome in one or the other of the Persian Gulf States. In all, therefore, remittances to Africa from the Persian Gulf are unlikely to return to their pre-crisis levels.

25. African policy response to the Persian Gulf crisis initially focused on crisis management, as a matter-of-course. Priority was given to ensuring that critical supplies of petroleum were obtained and that available limited supplies were conserved. Countries which previously depended on Iraq and/or Kuwait for their crude petroleum or refined products had to find new sources, and in most cases the bulk of the new supplies had to be procured on the spot market. A few countries, for example, Zimbabwe, sought emergency supplies from Nigeria, an oil-exporting country with declared intentions of supplying oil at concessional prices to African States in need of assistance. But, by and large, the limited and often costly supplies that were secured on the market were either distributed through a rationing mechanism, or prices were raised to reflect the much higher opportunity costs. The objective, in both cases, was to curtail consumption so as to limit the impact on the balance of payments of higher petroleum import prices. Now that the immediate crisis is over, the more fundamental issue of precarious energy supplies on the continent will have to be addressed.

26. But perhaps the greatest lesson to be learnt from the Gulf crisis by Africa is the need for a comprehensive energy policy which will reach beyond the traditional issues of diversification of energy sources to the questions of designing an overall regional energy strategy as part of an overall strategic plan for the African region as envisioned in the Lagos Plan of Action (LPA). In this connection, the establishment of an African energy commission as envisaged in the LPA for managing the efficient utilization and use of energy should be undertaken as a matter of urgency. The LPA has also emphasized the importance of energy management and identified the following problems and areas as most crucial:

(a) The lack of a national energy policy in most African countries and of absence of effective short-, medium- and long-term energy development programmes;

(b) The non-integration of energy activities in overall national development planning efforts;

(c) The urgent need to undertake an exhaustive inventory of all energy resources as well as an inventory of the existing and needed human power in Africa in the field of energy;

(d) The need for African countries to undertake joint action for the development and utilization of existing energy resources on the continent, for which cooperation would have to be initiated or expanded (where it already existed) in the energy field at the subregional and regional levels;

(e) The lack of funds for the implementation of energy development projects;

(f) The need to intensify exploration of hydrocarbons and coal resources, especially in those areas which have not yet been explored;

(g) The desirability of increased use of hydrocarbons for the development of petrochemical industries and transport rather than for the production of electrical energy;

(h) The difficulties existing in Africa in the transportation of energy, and the lack of standardization in the electricity sector;

(i) The lack of a suitable framework for concerted action and coordination which make it difficult to implement the recommendations adopted at earlier meetings on the subject of energy.

27. In the LPA and the Final Act of Lagos (FAL) considerable emphasis was placed on African subregional and regional cooperation as the mechanism for promoting African self-sufficient and self-sustaining economic growth and social progress, and nowhere is this strategy more evident than in the development and management of energy resources. In the short to medium term, it follows that one of the actions that the African countries could take in addressing its commercial energy problems is to form a buyers' co-operative, thereby pooling together their oil purchases. With a larger volume, they can diversify their sources so as to minimize the risk of future disruptions of supplies; they can obtain volume discounts; they can minimize shipping and insurance surcharges, eventually by leasing and/or owning their own petroleum tankers; they can collectively set up their own refineries on joint ventures basis; and they can build and maintain strategic buffer stocks. In short, what is needed most is energy policy coordination akin to that enjoyed by the OECD countries through the International Energy Agency, and which would embrace other facets of commercial energy such as hydro-electricity and coal.

28. Within such a framework, petroleum-surplus and petroleum-deficit countries would be integrated to their mutual benefit: the surplus countries gaining some insulation from the ups and downs of the world petroleum market, dependent largely, as they are, on exogenous factors and global demand and supply on which Africa has little or no control; and, the deficit countries gaining some degree of price stability and freedom from supply disruptions. African production of crude petroleum accounts for only about 9 per cent of world output, declining from 326.4 million tons in 1979 to 231.9 million tons in 1982 before rising to reach 290.9 million tons in 1989 and 324.3 tons in 1990. But, meagre as it is globally, it is nonetheless a multiple of the region's consumption, estimated at only 99.4 million tons in 1989 or 114 million tons in 1990.

29. In the long term, however, all African countries will need to diversify their primary energy sources away from oil to increase their level of energy self-sufficiency so as to reduce their susceptibility to the vicissitudes of the world petroleum markets. Hydro-electric power development, especially on a small-scale basis, will play a big role in this strategy, especially in Southern, Eastern, and Central Africa with rapid progress made towards the integration of national electric systems into subregional and, eventually, regional power grids. Geothermal power, wind and ocean wave power, solar power, biogas, etc. - all these should

play a significant role in a comprehensive energy policy, especially one geared to rural energy sufficiency. Moreover, given the fast growth rate of the African population, and the severe ecological impact of continued dependence on woody vegetation as energy sources, practical programmes to exploit these other renewable energy sources are long overdue.

30. Another area of vital importance is energy conservation, an area in which Africa has so far lagged far behind the industrialized economies and virtually every other region in the world, all of which have steadily been reducing their energy consumption per unit of GDP since 1980. Given the low level of energy efficiency in Africa, there should be considerable savings from using oil and other energy sources more sparingly. Oil conservation measures would include more stringent fuel efficiency standards for vehicles; better roads and railways; more efficient industrial plants and equipment; better maintenance and more regular inspection of transport and industrial machinery; more reliance on pedal-powered cycles for urban and rural transportation; and an energy-saving ethic in the population. Also, conservation as well as expanded energy resource development will be better promoted by realistic pricing of energy resources that better reflects the opportunity costs of commercial energy and fuels procurement. Such a comprehensive energy policy is a costly undertaking, admittedly, but so are the social and economic costs of recurrent energy crises, and of not planning ahead collectively and purposively.

Table 1. Oil production in developing Africa (1986-1990) (in millions of tons)

Country	1986	1987	1988	1989	1990
Algeria	48.9	48.9	50.7	55.3	60.9
Gabon	8.3	7.7	8.0	10.6	13.6
Libyan Arab Jamahiriya	52.0	49.0	50.8	55.0	68.2
Nigeria	74.0	67.0	68.3	80.3	88.7
OPEC sub-total	183.2	172.6	77.9	201.3	231.5
Angola	14.2	18.1	23.2	22.6	23.2
Cameroon	8.9	8.3	7.8	8.6	8.3
Congo	6.0	6.3	7.1	7.4	7.8
Côte d'Ivoire	0.9	0.8	0.7	0.6	0.6
Egypt	40.2	45.2	42.6	44.0	46.3
Ghana	0.1	0.1	0.1	0.1	0.8
Tunisia	5.2	5.0	4.8	4.9	4.6
Zaire	1.6	1.6	1.4	1.3	1.3
Non-OPEC sub-total	77.1	85.3	87.7	89.7	92.9
All African oil producers	260.3	258.0	265.5	290.9	324.4

Source: UNCTAD, Monthly Commodity Price Bulletin, 1990, various issues; Engineering and Mining Journal, 1990, various issues; and ECA secretariat.

Table 2. Imports of petroleum by African countries, 1979-1988 (in millions of $US)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
North Africa	1 460	2 265	2 833	2 603	2 625	2 408	2 178	1 599	1 882	1 933
West Africa	1 368	2 066	1 968	1 723	1 174	1 233	1 278	1 252	1 405	1 369
Central Africa	264	389	447	293	200	225	257	248	252	280
Eastern and Southern Africa	1 684	2625	2 502	2 285	1 903	1 901	1 785	1 372	1 468	1429
Total	4 776	7 345	7 751	6 904	5 902	5 768	5 498	4 470	5 007	5 012
Oil imports as percentage of total imports										
North Africa	5.8	7.8	7.4	7.2	7.5	6.8	6.3	4.9	4.4	4.2
West Africa	7.6	8.5	6.8	7.6	7.6	10.5	10.1	11.3	12.1	11.8
Central Africa	8.1	9.0	10.0	7.4	5.1	5.6	5.6	4.8	5.2	5.6
Eastern and Southern Africa	15.8	19.4	17.0	17.9	17.3	17.8	18.7	13.1	12.7	11.8
Total	6.8	7.8	10.1	10.4	9.4	9.0	8.4	9.0	9.0	8.9

Source: ECA secretariat.

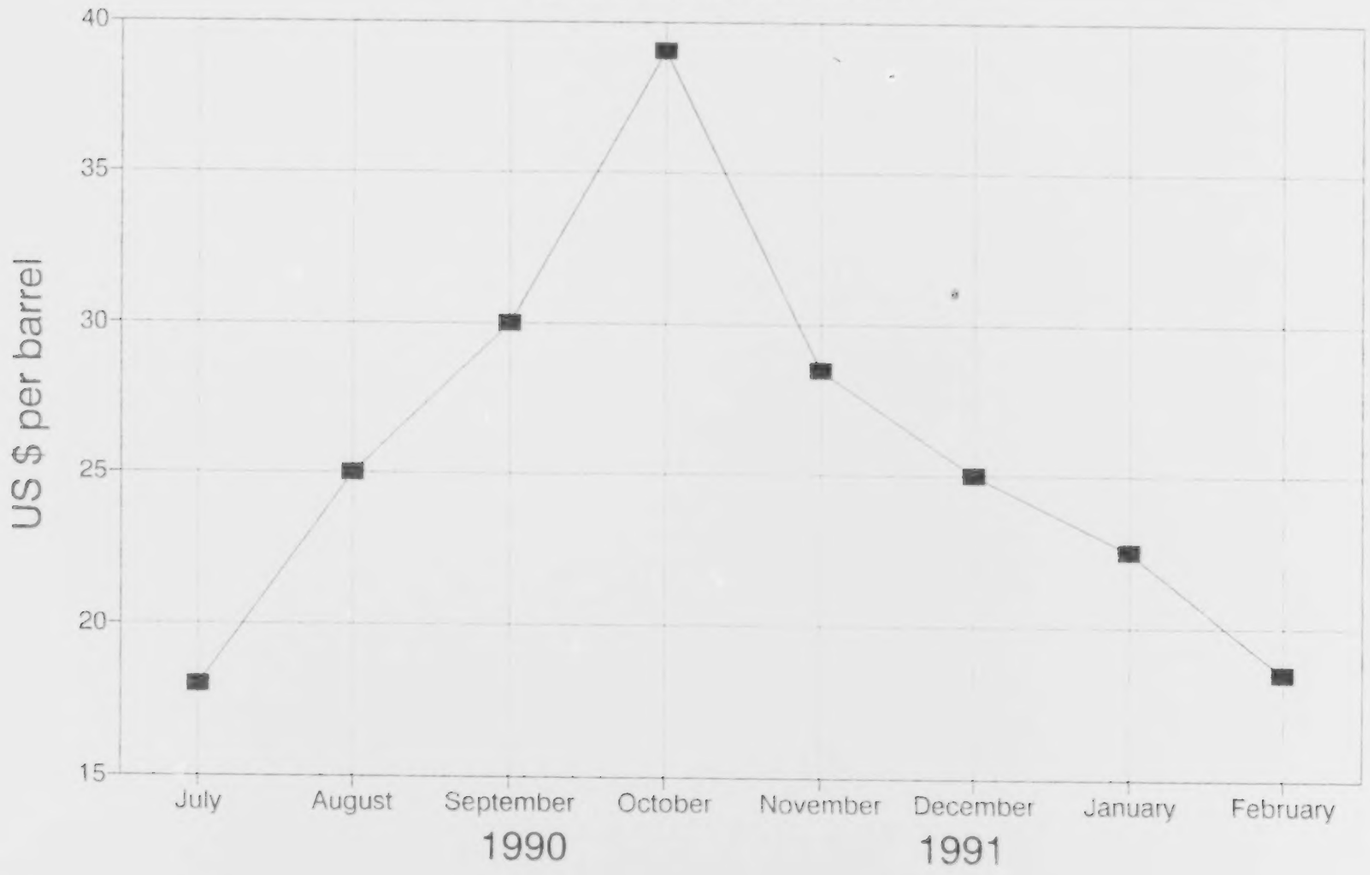
Table 3. Petroleum importation statistics for selected African countries (1988)

Selected countries	Billion US dollars		Fuel imports as % of total imports	Oil imports as % of commercial energy	Debt service exports (%)
	Total imports	Fuel imports			
Ethiopia	1.10	0.20	18	82	39.2
Kenya	2.00	0.40	20	75	37.8
Tanzania, United Republic of	1.20	0.20	17	83	24.6
Rwanda	0.40	0.08	20	19	12.7
Zambia	0.80	0.07	9	87	14.2
Zaire	1.20	0.04	3	60	15.9
Central Africa	0.20	0.002	1	..	12.8
Côte d'Ivoire	1.90	0.30	16	80	39.9
Senegal	1.20	0.10	8	100	30.2
Ghana	0.90	0.10	11	48	62.8
Morocco	4.77	0.53	11	82	29.1
Sudan	1.00	0.20	20	87	15.7
Total oil importers	34.10	6.80	20	31	26.6

Source: ECA secretariat.

Figure 1:Price of crude petroleum

Variation with the Gulf crisis a*



a* : preliminary estimate
Source: ECA secretariat.